



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,364	02/26/2004	Tetsuo Matsuda	Q80031	3415
23373 7590 03/21/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER PATEL, HEMANT SHANTILAL	
			ART UNIT 2614	PAPER NUMBER
			MAIL DATE 03/21/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/786,364	Applicant(s) MATSUDA ET AL.	
	Examiner HEMANT PATEL	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/18/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Specification refers to RAS 12 in figure 8 on page 15 but figure 8 does not have reference item 12. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

1. Claim 1 is objected to because of the following informalities: It recites ISP in ll. 5. The first use of an abbreviation must be preceded with actual phrase that it represents. Also, "physical link resource number" is recited to be greater than "logical link resource number", but both are recited to be representing the same "the number of said logical link resources" (ll. 9-11). Also, the claim recites "a terminal devices" (emphasis added). Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 recites the limitation "the physical link resource number" in ll. 32. There is insufficient antecedent basis for this limitation in the claim.

4. Claim 3 recites the limitation "the logical link resource number" in ll. 10-11 and "the physical link resource number" in ll. 12. There is insufficient antecedent basis for these limitations in the claim.

5. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It recites "comprehensively managing" (ll. 5). The scope of this comprehensiveness is not clear.

Claim Rejections - 35 USC § 103

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (US Patent No. 6,115,382), and further in view of Nattkemper (US Patent Application Publication No. 2002/0150108 A1).

Regarding claim 1, Abe teaches of a remote access server (Fig. 2, item 201 accessed remotely by a user) that receives data-link initiation request remotely (col. 8 ll. 4-19) from a terminal device (Fig. 2 item 204) and initiates a link (sets up new Permanent Virtual Connection (PVC)) to connect two network devices via Internet and

Asynchronous Transfer Mode (ATM) systems, dividing circuit resources between physical link resources (Fig. 4 Select endpoints) and logical link resources (Fig. 4 Type and Connection name), and controls connection (Fig. 6 item 306 connection object), and this server has means for receiving a request for new connection and setting up a new connection that was not used (Fig. 7 connection create request); and a means for receiving a request from a terminal device a transition to dormant state (user at terminal 204 requesting to inactivate or deactivate a connection) which results in releasing connections in Network Elements (NEs) but the PVC connection object is retained in the connection object management table (Fig. 6 item 306), and receiving a reconnection request (user at terminal 204 requesting to activate a connection) and using connection identifier to implement a reconnection (col. 6 ll. 61-col. 7 ll. 41) (refer to Figs. 1-25 and their corresponding descriptions for details of different embodiments for management of logical and physical link resources through connection objects; also col. 2 ll. 46-col. 4 ll. 67).

The limitation of logical resource number greater than physical link resource recited in the preamble of this claim is system engineering consideration based on the business needs as was well known in the art.

Abe does not teach of receiving requests from a terminal to manage its connection to Internet Service Provider (ISP).

However, in the same field of endeavor, Nattkemper teaches of a method and a system wherein a user device requests automatic activation (Paragraph 0023 data

transmitted using virtual circuit identifier) of its PVC connection to ISP (Paragraph 0022
ISP is the desired destination) (Paragraphs 0017-0028, 0031-0047).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the functionalities of Abe and Nattkemper to provide "for improvements in end-to-end provisioning of communicating systems" (Nattkemper, Paragraph 0004) so that "A method of automatic permanent virtual circuit connection activation is provided" (Nattkemper, Paragraph 0006) by implementing "efficient, accurate PVC connection reservation control over a network domain" (Abe, col. 2 ll. 48-50).

Regarding claim 2, it recites a remote access server with units providing functions substantially similar to the remote access server recited with means functions in claim 1. Abe teaches of a link information management unit (Fig. 6 item 301; also col. 3 ll. 64-col. 4 ll. 11 PVC-VP/VC allocation table) managing PVC connection objects with corresponding connection information with its connection state (Figs. 4-5); a physical link resource control unit (Fig. 6 item 302) managing physical resources in NEs based upon requests to create, inactivate (dormant) or activate (reconnection) a connection (col. 6 ll. 61-col. 7 ll. 41), and active/inactive state controlling unit issues command to physical NEs and upon receiving responses uses the logical link resource (PVC connection object) to switch its state (col. 6 ll. 61-col. 7 ll. 41).

The limitation of logical resource number greater than physical link resource recited in this claim is system engineering consideration based on the business needs as was well known in the art.

Abe does not teach of receiving requests from a terminal to manage its connection to Internet Service Provider (ISP).

However, in the same field of endeavor, Nattkemper teaches of a method and a system wherein a user device requests automatic activation (Paragraph 0023 data transmitted using virtual circuit identifier) of its PVC connection to ISP (Paragraph 0022 ISP is the desired destination) (Paragraphs 0017-0028, 0031-0047).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the functionalities of Abe and Nattkemper to provide "for improvements in end-to-end provisioning of communicating systems" (Nattkemper, Paragraph 0004) so that "A method of automatic permanent virtual circuit connection activation is provided" (Nattkemper, Paragraph 0006) by implementing "efficient, accurate PVC connection reservation control over a network domain" (Abe, col. 2 ll. 48-50).

Regarding claim 3, it recites a method substantially similar to the method performed by the remote access server recited in claim 1. Refer to rejection for claim 1.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe, and further in view of Nattkemper, and further in view of Lindquist (US Patent Application Publication No. 2002/0131430 A1).

Regarding claim 4, it recites a communication system comprising a connection management server substantially similar to the link information management unit recited in claim 2, and plurality remote access servers (RAS) with each RAS provided with a

Art Unit: 2614

physical link resource control unit and a logical link resource control unit substantially similar to that recited in claim 2. Abe teaches of a server with link information management unit (Fig. 6 item 301; also col. 3 ll. 64-col. 4 ll. 11 PVC-VP/VC allocation table) managing PVC connection objects with corresponding connection information with its connection state (Figs. 4-5); a physical link resource control unit (Fig. 6 item 302) managing physical resources in NEs based upon requests to create, inactivate (dormant) or activate (reconnection) a connection (col. 6 ll. 61-col. 7 ll. 41), and active/inactive state controlling unit issues command to physical NEs and upon receiving responses uses the logical link resource (PVC connection object) to switch its state (col. 6 ll. 61-col. 7 ll. 41).

The limitation of logical resource number greater than physical link recited in this claim is system engineering consideration based on the business needs as was well known in the art.

Abe does not teach of receiving requests from a terminal to manage its connection to Internet Service Provider (ISP) and logical link resources with information specifying remote access server in which they are provided, and issuing connection request to inter-RAS communication controller.

However, in the same field of endeavor, Nattkemper teaches of a method and a system wherein a user device requests automatic activation (Paragraph 0023 data transmitted using virtual circuit identifier) of its PVC connection to ISP (Paragraph 0022 ISP is the desired destination) (Paragraphs 0017-0028, 0031-0047).

Art Unit: 2614

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the functionalities of Abe and Nattkemper to provide "for improvements in end-to-end provisioning of communicating systems" (Nattkemper, Paragraph 0004) so that "A method of automatic permanent virtual circuit connection activation is provided" (Nattkemper, Paragraph 0006) by implementing "efficient, accurate PVC connection reservation control over a network domain" (Abe, col. 2 ll. 48-50).

Abe and Nattkemper are silent on inter-server communication between their servers providing connections.

However, in the same field of communication, Lindquist teaches of specifying and using inter-domain call connection between media gateways of different domains (Figs. 15-19, 23 specifically step 2350 and their corresponding descriptions).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Abe and Nattkemper to extend the connection mechanism to provide inter-domain connections as taught by Lindquist in order to "utilize existing switches to enable a gradual migration from narrowband networks to broadband transport mechanisms via the implementation of hybrid switches" (Lindquist, Paragraph 0019) where "broadband endpoint information includes the address of the selected broadband endpoint and the logical connection identifier for the selected broadband endpoint" (Lindquist, Paragraph 0021).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 7,142,530	Chewning	
US Patent No. 7,042,988	Juitt	
US Patent No. 6,529,499	Doshi	
US Patent Application Publication No. 2004/0196826		Bao
US Patent Application Publication No. 2004/0028036		Mose

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEMANT PATEL whose telephone number is (571)272-8620. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Fan Tsang/
Supervisory Patent Examiner, Art Unit 2614

Hemant Patel
Examiner
Art Unit 2614

HSP